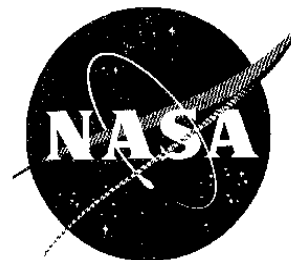


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Polar clouds impacting ozone destruction in the Arctic

For the first time scientists have a better understanding of the polar clouds that lead to ozone destruction and possibly to a future “ozone hole” over the Arctic.

Researchers will present these and other findings from the Sage III Ozone Loss and Validation Experiment (SOLVE) conducted during the winter of 1999-2000 at the Fall American Geophysical Union (AGU) meeting in San Francisco, Dec. 15-19, 2000.

During SOLVE, scientists determined the extent and properties of polar stratospheric clouds (PSCs) and the amount of ozone destruction in the Arctic. Once this new information is incorporated into chemistry and climate models, scientists will have a better idea of the extent of future ozone destruction in the Arctic.

Clouds form during cold Arctic winters in the stratosphere — a layer of the atmosphere ranging from about 6 to 30 miles above the ground. In sunlight, these PSCs help release ozone-destroying chlorine from non-harmful gases. Since Arctic winters may become colder due to climate changes, scientists believe this will lead to more PSCs, which may mean even greater ozone loss and eventually an “ozone hole” in the Arctic.

“This experiment [SOLVE] was very successful because we remotely saw the large-scale characteristics of PSCs, aiding in our understanding of their impact on ozone destruction,” said Edward Browell, head of the Lidar Applications Group at NASA Langley Research Center, Hampton, Va. “Even though this research is a great step forward, there are still many things to be learned about PSCs,” he added.

Browell will discuss this new research at the AGU meeting in San Francisco, Dec. 16, at 3:35 p.m. (Moscone Center 131, Session A62C).

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